Benefits of Investments in Higher Education

Tennessee Higher Education Commission — January 2002

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As Tennessee enters the twenty-first century, elected and appointed officials affiliated with the state's higher education system find themselves struggling with a scarcity of monetary resources during a time of heightened expectations of performance from all higher education institutions. It is ironic to note that in a time of severe financial shortcoming, institutions across the state have continued to offer a high quality education to their students. The growing number of students choosing to attend higher education institutions in Tennessee indicates this quality.

In the last decade, Tennessee's public higher education enrollment has increased from 155,053 headcount in 1988 to 190,350 in 2000, representing a 25 percent increase. In 2000, Tennessee public post-secondary institutions conferred 6,031 associates, 14,637 bachelor's, 5,172 master's, and 654 doctor's degrees. As the number of students attending college has increased so has the financial burden placed upon them. Students and their families have been forced increase their commitment to higher education, as annual tuition increases have averaged 4-5 percent in the late 1990s and with tuition revenues increasing by 28 percent since 1993-94 (Table 1). In essence, the hesitance of the political system to fund higher education through tax reform has essentially created an indirect tax on students and their families.

Table One
Increase in State Approp. & Fee Revenues, 93-94 to 98-99 (in millions)

	1993-94	1994-95	1995-96	1996-97	1997-98	1998-99	Incr.
State Approp.	$826	$891	$904	$919	$910	$968	**17%**
Fee Revenues	$282	$290	$306	$323	$350	$373	**32%**

Source: Tennessee Higher Education Commission, Fiscal Data System

Because of stagnant state appropriations earmarked for higher education, higher education leaders have been forced to do an excellent job of belt-tightening. Elected officials, trustees, and campus leaders have been instrumental in ensuring increased efficiency and accountability to maximize the utility of those funds that are available. Inventive statewide accountability programs such as *Challenge 2000* and *Performance Funding* have been coupled with increased communication between higher education leaders, members of the legislature, and the governor's office to maximize the goals of efficiency, effectiveness, and accountability of higher education finance.

Short-term efficiencies have been realized, but long-term deficiencies such as deferred maintenance, salary compression, and the loss of research enterprises are beginning to show as the value of higher education in Tennessee has become compromised by the decreased investments in the enterprise. Higher education is increasingly losing its best and brightest faculty and students to competing states who are able to offer higher salaries, better facilities, and more diverse learning environments.

Tennessee's structural tax problems have been widely debated for years. Regardless of one's political or fiscal philosophy, it is difficult to ignore the prosperity of our neighboring states, especially when attention is focused upon the higher education sector. Investment increases in higher education in the SREB states have averaged 5.7% in the last five years. As Table 2 displays, appropriation increases for higher education in Tennessee have significantly lagged those of the SREB states from 1993-94 to 1998-99.

Table Two State Approp. For Higher Education (in millions)			
State	FY 93-94	FY 98-99	Annual Average Change (5 Years)
Alabama	$892	$1,029	2.9%
Arkansas	$418	$556	5.9%
Delaware	$126	$169	6.0%
Florida	$1,586	$2,499	9.5%
Georgia	$1,035	$1,484	7.5%
Kentucky	$630	$889	7.1%
Louisiana	$568	$748	5.7%
Maryland	$749	$940	4.7%
Mississippi	$459	$787	11.4%
North Carolina	$1,630	$2,171	5.9%
South Carolina	$624	$762	4.1%
Tennessee	$829	$944	2.6%
Texas	$3,188	$3,528	2.0%
Virginia	$950	$1,296	6.4%
West Virginia	$297	$362	4.1%
Source: Illinois State, Grapevine Database, 1999			

As Governor Sundquist stated in a recent speech, the tax system's structural inadequacies have led to sluggish revenue collection in an era of unprecedented growth in the national economy. In an era in which several of the states surrounding Tennessee have operated with large budget surpluses, Tennessee has been handicapped by financial shortcomings that prevent any effort to increase funding and improve the quality and access to higher education for its citizens. Because of court influenced initiatives in areas such as K-12 education, prisons, mental health, and TennCare, the state has had a declining commitment to provide the resources necessary to operate a first class system of higher education. As a result, institutions across Tennessee have been forced to compromise the quality of their faculty, information resources, and technological adaptations. Students have become aware of these deficiencies, as increasing numbers of students leave the state to pursue educational opportunities elsewhere. This "brain drain" is placing the future of our state in peril.

Because of the funding structure in Tennessee, colleges and universities depend upon tuition and state appropriations to meet an increasing proportion of the fiscal demands. Table 3 demonstrates the efforts of Tennessee in relation to other SREB states with respect to state appropriations per FTE, a measure of the commitment of state tax dollars to the higher education enterprise. According to this data, Tennessee ranks last among these comparison states in total resources available per student from 1994 to the 2000 fiscal year. Furthermore, institutions are forced to serve students with less than $1,303 dollars per students than they had to work with in the 1994-95 academic year. Research has suggested that this discrepancy will become larger in coming fiscal cycles, as other states continue to allocate record increases to higher education while Tennessee has largely met its expenditures by levying tuition increases.

Table 3: Trends in State/Local General Operating Appropriations Per FTE at Public Colleges and Universities[3] (adjusted for inflation)

	Four-Year Colleges and Universities			
	1994-95	1999-2000	Change	Change
SREB states	$5,997	$6,037	$40	0.7
Alabama	5,777	4,871	-906	-15.7
Arkansas	5,451	5,618	167	3.1
Delaware	--	5,503	--	--
Florida	7,869	7,520	-349	-4.4
Georgia	6,427	7,562	1,135	17.7
Kentucky	5,083	5,025	-58	-1.1
Louisiana	3,908	3,803	-105	-2.7
Maryland	7,217	7,054	-163	-2.3
Mississippi	5,652	6,321	669	11.8
North Carolina	7,836	7,862	26	0.3
Oklahoma	4,753	5,204	451	9.5
South Carolina	5,498	5,367	-131	-2.4
Tennessee	6,633	5,330	-1,303	-19.6
Texas	6,261	6,133	-128	-2.0
Virginia	4,707	5,766	1,059	22.5
West Virginia	4,188	3,954	-234	-5.6

The following analysis will frame the importance of higher education to the overall economic and social fabric of Tennessee and the region. Experts from a variety of disciplines have noted that education is the engine that will drive the nation's economy in the new century. In an economic era that demands technical expertise, Tennessee must improve the quality of education that it provides to its citizens if they are to remain competitive in the global marketplace. Higher education contributes to increased workforce flexibility by educating individuals in generalizable skills such as critical thinking, writing, and interpersonal communication that are essential to Tennessee's ability to retain its competitive edge (Pascarella and Terenzini 1991). For too long, many have viewed the funds allocated to higher education as consumptive. This study will demonstrate that resources invested in post-secondary education are a crucial, long-term investment in the growth, development, and quality of life for all Tennesseeans.

REFRAMING THE HIGHER EDUCATION DEBATE: COST VERSUS INVESTMENT

In the 1980's economic development strategies shifted from the issues of labor, land, and taxes to a focus on investments in human resources and research (Melville and Chmura 1991). Economic and social viability is increasingly linked to "what you know" as much as they are to "what you do". In a report by the American Association of State Colleges and Universities (AASCU), the national job market was predicted to grow by 18.6 million positions between 1996 and 2006 (AASCU 1998). Service industries were predicted to outpace the growth of goods producing industries as a more knowledge-based economy replaces a skill dependent system. As we enter the next century, AASCU's report forecasts that jobs in professional specialties, such as business and health care, will supplant manufacturing and production in driving economic growth. Because of this new focus on human capital, public and private spending on education and training must be viewed as investment tools rather than consumptive costs, and a premium must be placed on life-long learning.

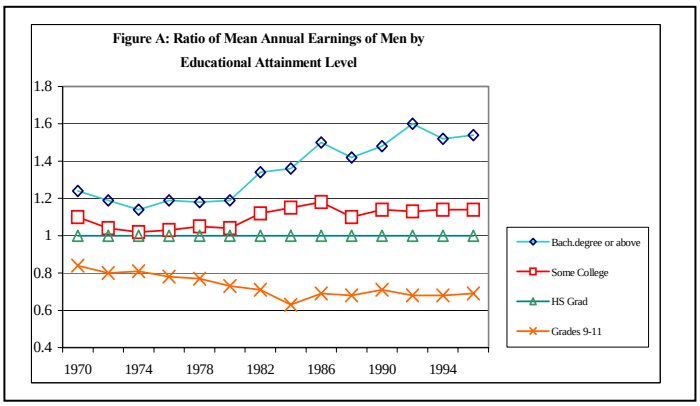
Education and training are accepted as the primary paths for investing in human capital, also referred to as people potential (Nespoli 1991). Growth economists have stated that human capital presently contributes more than physical capital (technology, infrastructure, etc.) to economic development and expansion. Business and industry rely upon two sources to boost the state economy – new entrants to the workforce and the current workforce. Increasingly, both in Tennessee and across the nation, new entrants to the economic system are individuals from disadvantaged backgrounds. Policies that deter members of these disadvantaged groups from the postsecondary system run counter-productive to economic development goals because these potential students are also future contributing taxpayers and active citizens in their respective communities.

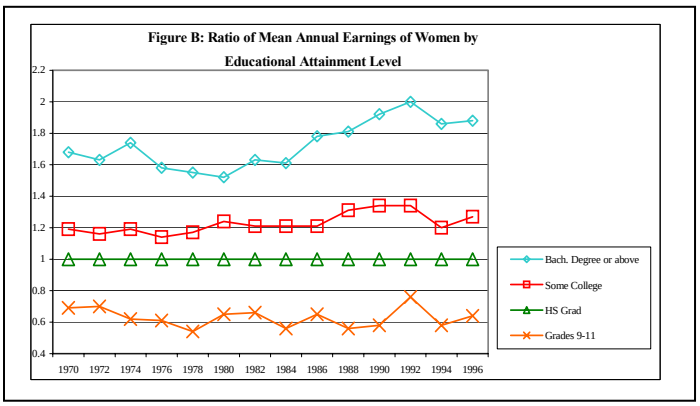
Social scientists have pointed out that the radical demographic shifts being faced in America are prompting change more dramatically than government policy has ever done (Justiz 1994). Access to and diversity of participation in higher education is being given urgency because of the rapid developments in technology and changing workforce needs. Opponents of educational attainment and socioeconomic diversity initiatives sometimes overlook the economic reality of the costs of allowing access to postsecondary education versus costs associated with the maintenance of welfare, unemployment, and prisons. The costs of access to higher education should be perceived as investments, while spending in the areas noted above are outright consumptive costs. Elected and appointed officials can either invest now by reducing some of the obstacles that stand in the way of economic and social progress or pay much more later to compensate for alternative policy decisions.

In a 1998 report developed by the Institute for Higher Education Policy, the public and private benefits of going to college were distilled into four categories: [1] private economic benefits; [2] public economic benefits; [3] private social benefits; and [4] public social benefits. Using this framework, the status of Tennessee higher education will be examined in light of the present funding levels and existing performance and/or participation indicators. Great strides have been taken by the authors to provide comparative statistics from other SREB states and national-level data where available.

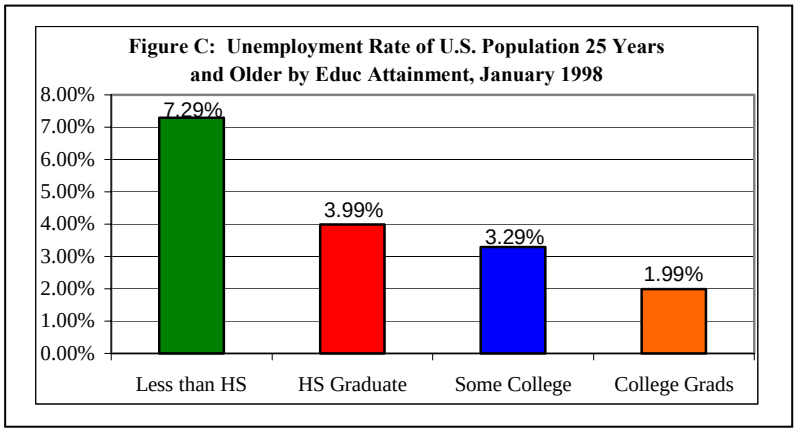
Private (Individual) Economic Benefits

As previously noted, formal education has a strong positive association with private earnings and public revenues, thereby making state appropriations to all levels of education much more of an investment than a cost. Not only are individuals who have gone to college employed at higher rates, they can expect to earn more as a result of this education (IHEP 1998). The receipt of a bachelor's degree provides citizens with approximately a 40 percent income advantage over those holding a high school diploma depending on occupations (Pascarella and Terenzini 1991). The returns to workers with even some post-secondary training has been increasing over the last 25 years (Grubb 1997). In 1970 men with "some college" earned 10% more than men reporting to be "high school graduates" (NCES 1998). By 1996, this figure had grown to 14%. Among women, the figure was 19% in 1970, but had grown to a 27% difference between "high school diploma" and "some college" by 1996. By encouraging increased participation in postsecondary education and training, state policy makers will greatly enhance the earnings potential and productivity of its workforce. The following graphs display other examples of this earnings differential for men and women ages 25-34 by educational attainment level. One should note that "high school graduate's earnings" are the base data for all comparisons relative to other levels of education.



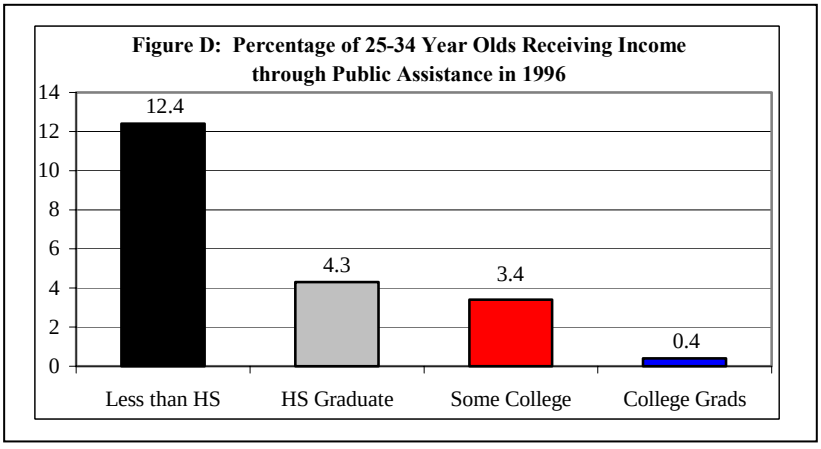


In addition to higher earnings potential, individuals who pursued or obtained postsecondary degrees have higher savings levels, improved working conditions, and personal/professional mobility (IHEP 1998). These circumstances provide for enhanced flexibility and ensure a more productive and satisfied workforce. Rates of unemployment seem to echo the flexibility and options that are provided to those with educational credentials. For the U.S. population 25 years and older, unemployment rates by educational attainment level show that their employment likelihood increases proportionally with degree attainment (Figure C).



Public Economic Benefits

Benefits accrue to society as a whole when more of its members participate in postsecondary education and life-long learning activities. Most notable among these benefits are returns in increased tax revenues. Research has demonstrated that individuals with at least some college education paid 71 percent of all federal taxes, even though those same individuals account for only 49 percent of all households (IHEP 1998). Additionally, a recent study by the Tennessee Board of Regents found that for each dollar invested in an individual's higher education, society may expect a return of $9.30 and the state can expect to experience a return of $1.04 in tax revenue (TBR 1998). Appropriations to higher education are indeed societal investments, as clear returns are produced from initial budgetary outlays.



Increased educational attainment levels also result in a greater rate of overall consumption of gods and services. Levels of educational attainment have been shown to influence greater spending on items such as housing, food, and transportation. As previously noted, economic expansion in Tennessee's knowledge-based economy must be is driven by increased educational attainment rates. Furthermore, greater productivity has been the by-product of efforts to invest in human capital. Workforce

flexibility and productivity enable strong economic systems to maintain momentum while adapting to changes in technology and the environment.

A final public economic benefit to investment in education is a decreased reliance on government financial support (IHEP 1998). Participation in programs such as welfare, food stamps, medical assistance, and housing assistance decreases as the level of education attended increases. As detailed in Figure D, 25- to 34-year olds who completed 9-11 years of high school were three times more likely than high school graduates to receive income from public assistance programs (IHEP 1998). For those persons who completed the bachelor's degree, the percentage of participants in public assistance dropped to 0.4 percent.

Private (Individual) Social Benefits

Better educated citizens have an increased capacity to make informed consumer decisions and recognize increased personal status. Status within occupational environments and the family structure have each been tied to personal educational attainment. With further education, citizens are more likely to engage in hobbies and leisure activities. An individual's quality of life also is enhanced by improved health and those obtaining a college education find increased life expectancy (Justiz 1994). The ability to adapt to constantly changing technological advances is tied to collegiate education. Individuals with such attributes contribute more to the development and dissemination of efficient technologies than less educated counterparts.

Beyond these individual social rewards, the individual value of education is enhanced and reveals itself in generational transfer. The more individuals develop intellectual and career opportunities, then the more likely they are to believe in encouraging these same faculties for their children. Research has shown that children of college educated parents are more likely to pursue postsecondary education and reap "quality of life benefits" through increased personal and academic development.

Public Social Benefits

Society benefits from a more educated populace in ways other than just fiscal returns. Crime rates have been shown to decrease as the rate of education increases. Education is the driving force in preparing citizens for participation in political, economic, and social aspects of their communities. As detailed in Table 4, bachelor's degree holders were 40 percent more likely than high school graduates to be a member of a community organization, 28 percent more likely to have voted in national or state elections, and 90 percent more likely to have contributed money to a candidate or political cause. Analysis of charitable giving of time and money reveals that 66 percent of those with some college and 77 percent of those with a bachelor's degree give and perform volunteer work. Only 45 percent of high school graduates and 22 percent of high school dropouts report philanthropic activities of this kind. Additionally, proof of interest in social, political and economic issues is enhanced by data that shows the frequency of news intake to be positively associated with education attainment.

Table 4: Indicators of Civic and Political Involvement
Percentage of Adults Who Reported Various Activities

	Less than HS	HS Grad	Some College	Bach Degree	Grad/ Prof
Member of community organization	45	54	60	74	85
Voted in national or state election in last 5 years	51	72	85	91	89
Contributed money to candidate or political cause	7	12	16	23	28
Read a newspaper in last week	71	86	90	91	92
Read about national news in last week	38	53	57	69	81
Watched nat'l news on TV or listened on radio in last week	89	91	94	94	96

Source: NCES, The Condition of Education, 1998

Social cohesion and an appreciation for societal diversity represent the final and perhaps most important public social benefits from investments in higher education. Research has shown that students with high levels of exposure to diverse opinions and issues display increases in their thinking skills, intellectual curiosity, and motivation. (Pascarella et al 1996). There is a great deal to be learned from being in new surroundings and

learning amidst social differences. College is an essential period for gaining exposure to new ideas, cultures, and beliefs. If barriers of social awareness are ever to be lessened, higher education must provide the spark for this progress (Noland, Lyons, and Davis 1999).

CONCLUSIONS

In making the transition to view higher education appropriations as investments, many charge that harmful economic and social costs will be the consequence of shirking the responsibility to fiscally support higher education. The Institute for Higher Education Policy (IHEP) identified six results to deteriorating support for public education: (1) growing social and economic disparities; (2) increasing public expenditures on social welfare programs; (3) inability to compete in an increasingly technological society; (4) stagnant or declining quality of living; (5) decreasing health and life expectancy; and (5) diminishing civic engagement and responsibility. As a result of deficient funding in Tennessee over the last decade, the higher education system finds itself struggling with the reality of increasing demands and decreasing resources. Higher education continues to be one of the central keys to opening the door to prosperity and individual self-actualization. Viewed as a benefit to the consumer of its knowledge and as a vehicle for collective social and economic advancement, postsecondary education remains one of the safest investments among the vast array of government programs and services.

Education and training are accepted as the primary paths for investing in human capital, also referred to as "people potential." Growth economists have stated that human capital presently contributes more than physical capital (technology, infrastructure, etc.) to economic development and expansion. Business and industry rely upon two sources to boost the state economy – new entrants to the workforce and the current workforce. Increasingly, both in Tennessee and across the nation, new entrants to the economic system are individuals from disadvantaged backgrounds. Policies that deter members of disadvantaged groups from the postsecondary system run counter-productive to economic development goals because these potential students are also future contributing taxpayers and active citizens in their respective communities. Furthermore, one of the primary responsibilities of government is to allocate as much of their fiscal resources as possible to education. No other social program demonstrates the tangible rate of return as education.

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